

A MULTI-GATE ONE-TRANSISTOR DYNAMIC RANDOM ACCESS MEMORY

ABSTRACT OF THE DISCLOSURE

The present invention provides a one-transistor dynamic random access memory (1T DRAM) device (100). The 1T DRAM device (100) includes a body region (105) insulated (110) from a substrate (115) and an insulating layer (120) on a surface of the body region (125). A gate structure (130) is on the insulating layer (120) and conformally surrounding portions of the body region (105). A width of the body region (145) is sufficient to provide a not fully depleted region. Other embodiments include a method of manufacturing a 1T DRAM device (200) and an integrated circuit (300).